

³
40. The appliance as recited in claim ²~~39~~ wherein said screen comprises a porous sheet.

⁴
41. The appliance as recited in claim ¹~~38~~ wherein said reduced pressure is from about 2 in. Hg below atmospheric pressure to about 7 in. Hg below atmospheric pressure.

^{9/ cont}
^{Sub B2}
42. The appliance as recited in claim 38 wherein said support means is integrally formed with said cover and said reduced pressure supply means comprises a suction port on said cover.

43. The appliance as recited in claim 42 wherein said seal includes a cuff around the periphery of said cover for preventing said cover from digging into the skin during the treatment.

^{Sub B2}
44. The appliance as recited in claim 38 wherein said seal includes an adhesive material on the cover for securing said cover to the tissue surrounding the wound.

⁷
45. The appliance of Claim ¹~~38~~ wherein said cover comprises a flexible sheet.

⁸
46. The appliance of Claim ⁷~~45~~ wherein the support means connects with said sheet for supporting said sheet outward from the wound.

⁹
47. The appliance of Claim ⁸~~46~~ wherein said support means comprises a support member located between said sheet and the wound.

^{546 80}
^{EB}
48. The appliance of Claim ⁹~~47~~ wherein said support member includes a porous cup member having a connection port for connecting with said reduced pressure supply means.

11
49. The appliance of Claim 47 comprising a pad between the wound and said support member for alleviating discomfort caused in the wound by said support member.

12
50. The appliance of claim 46 wherein said support means comprises a support member extending outwardly over the wound and external to said sheet.

13
51. The appliance of claim 50 wherein said support means comprises attachment means for attaching said sheet to said support means, said attachment means having a connecting member for connecting with said reduced pressure supply means for providing said reduced pressure beneath said sheet, and said support member comprising a plurality of leg members attached to said attachment means for holding said attachment means and said sheet outward from the wound.

52. The appliance as recited in claim 50 comprising a pad positioned between edges of the shield and the tissue surrounding the wound.

15
53. The appliance of Claim 51 comprising a screen adapted to prevent overgrowth of the wound for placement at a location between the wound and said cover and which is secured in said location at the periphery of said cover.

54. The appliance of Claim 53 wherein said screen comprises a sheet-like mesh.

17
55. The appliance of Claim 53 wherein said seal includes an adhesive material on the cover for adhering to tissue surrounding the wound and a seal member at least partially overlying said cover.

56. The appliance as recited in Claim 47 wherein the support means includes a convex shield and wherein the flexible sheet overlies and extends beyond the shield at the

periphery of the sheet.

¹⁹
~~57.~~ The appliance as recited in claim ¹⁸~~56~~ wherein the seal cooperates with a portion of the flexible sheet that extends beyond the shield to seal the cover.

²⁰
~~58.~~ The appliance as recited in claim ¹~~38~~ wherein said support means is separate from said cover.

²¹
~~59.~~ The appliance as recited in claim ¹~~38~~ comprising only a single port associated with said cover for connecting said reduced pressure supply means to said cover.

91 Cont. *Sub B5 and*
~~60.~~ An apparatus for treating a wound comprising:
(a) a vacuum system for producing a reduced pressure;
(b) a reduced pressure appliance operably connected with said vacuum system for applying said reduced pressure to the wound, the appliance including:
(i) an impermeable cover for covering and enclosing the wound and for maintaining reduced pressure at the site of the wound;
(ii) support means associated with said cover for holding said cover out of contact with the wound;
(iii) a seal operably connected with the cover for sealing said cover to tissue surrounding the wound; and
(iv) reduced pressure supply means operably connected with the cover for connection with the vacuum system for supplying and maintaining said reduced pressure to the wound.

²²
²³~~61.~~ The apparatus as recited in claim ⁶⁰ wherein said vacuum system includes a collection device for collecting fluid aspirated from the wound.

24
23
Sub E6
62. The apparatus as recited in claim 61 wherein said collection device includes means for halting said application of reduced pressure to the wound when said fluid exceeds a predetermined quantity.

25
24
63. The apparatus of Claim 62 wherein said reduced pressure supply means comprises a length of tubing, said collection device comprises an aspirating container connected along said length of tubing between said vacuum system and cover, and said halting means comprises a flotation valve within said aspirating container for blocking said tubing when a predetermined amount of fluid is collected within said container.

26
24
a/c cont
64. The apparatus of Claim 62 wherein said collection device comprises an expandable chamber and said means for halting said application of reduced pressure comprises sensing means for sensing expansion of said expandable chamber, said sensing means operatively connected with said vacuum system so that said reduced pressure is halted when a predetermined expansion of said expandable chamber is sensed by said sensing means.

27
24
65. The apparatus of claim 62 wherein said reduced pressure supply means comprises a length of tubing and said halting means comprises a filter along said tubing, said filter having pores that block the supply of reduced pressure via said tubing when said pores are filled with said fluid.

28
32
66. The apparatus as recited in claim 60 wherein said reduced pressure is from about 2 in. Hg below atmospheric pressure to about 7 in. Hg below atmospheric pressure.

29
22
Sub E7
67. The apparatus of claim 60 wherein said reduced pressure supply means comprises a length of tubing connected between said vacuum system and said cover and wherein said vacuum system comprises:

- (a) a vacuum pump connected with said tubing; and
- (b) a filter for preventing said pump from venting micro-organisms aspirated from the wound.

30
68. The apparatus of Claim 29 wherein said filter is connected along said tubing between said pump and said cover for preventing contamination of said pump.

546
69. The apparatus of claim 60 wherein said vacuum system comprises control means for cyclically controlling said production of reduced pressure in alternating periods of production and non-production of reduced pressure.

61
70. The apparatus as recited in claim 60 wherein said support means is separate from said cover.

32
71. The apparatus as recited in claim 60 comprising only a single port associated with said cover for connecting said reduced pressure supply means to said cover.

72. A method of treating a wound comprising the steps of:

(a) applying a reduced pressure to the wound, wherein said applying step comprises steps of:

- (i) locating an impermeable cover over the wound, said cover having a suction port;
- (ii) supporting said cover out of contact with the wound;
- (iii) sealing the periphery of said impermeable cover to tissue surrounding the wound; and
- (iv) operably connecting said suction port with a vacuum system for producing said reduced pressure; and

(b) maintaining said reduced pressure until the wound has progressed toward a selected stage of healing.